

AMENDMENT UNDER 37 C.F.R. § 1.116  
Application Serial No. 10/690,569  
Attorney Docket No. Q72585

**AMENDMENTS TO THE CLAIMS**

**This listing of claims will replace all prior versions and listings of claims in the application:**

**LISTING OF CLAIMS:**

1. (currently amended): An information storage apparatus comprising:  
a storage medium including a plurality of information tracks; and  
a head assembly having:  
a substantially planar surface; and  
a plurality of read/write heads positioned in registry with said information tracks;  
wherein the read/write heads are arranged substantially in the plane of said planar surface  
and wherein said information storage medium and said head assembly are arranged in mutually  
sliding abutment such that said read/write heads are substantially in sliding contact with the outer  
surface of the information storage medium in use; and

said information storage apparatus further comprises a refresh sub-assembly for ensuring  
that an optimal signal strength is maintained;

wherein the refresh sub-assembly comprises a signal strength monitor for monitoring a  
signal strength available from the storage medium, said refresh sub-assembly means being  
arranged to rewrite the received signal if the signal strength available falls below a  
predetermined threshold.

2. (original): An information storage apparatus as claimed in claim 1 wherein said heads  
are provided on a monolithic layer.

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3. (original): An information storage apparatus as claimed in claim 1 wherein the heads are fixed in position and the information storage medium overlies the heads a lubricating layer provided therebetween.

4. (original): An information storage apparatus as claimed in claim 3 wherein said lubricating layer comprises a self-lubricating layer on at least one of the storage medium and head array.

5. (original): An information storage apparatus as claimed in claim 4 wherein said self-lubricating layer comprises an artificial diamond coating.

6. (original): An information storage apparatus as claimed in claim 1 wherein all of the read/write heads are mounted on a single member.

7. (original): An information storage apparatus as claimed in claim 6 wherein said member is generally sized and shaped to correspond to the size and shape of the information storage medium.

8. (original): An information storage apparatus as claimed in claim 7 wherein said information storage medium and said head assembly comprise similar substrates.

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9. (original): An information storage apparatus as claimed in claim 1 wherein said storage medium and read/write heads are resiliently biased together.

10. (original): An information storage apparatus as claimed in claim 1 wherein the heads are arranged topologically in a rectangular array.

11. (original): An information storage apparatus as claimed in claim 10 wherein said head array comprises connections to both ends of the rows and columns.

12. (original): An information storage apparatus as claimed in claim 1 wherein the head assembly comprises pre-processing and/or pre-amplification circuitry for pre-processing and/or pre-amplifying data read by said heads prior to being output from the head assembly.

13. (original): An information storage apparatus as claimed in claim 1 wherein said storage medium and/or said head assembly comprises a substrate of glass having a coefficient of expansion less than 1 nm per 100 mm per Kelvin temperature rise.

14. (original): An information storage apparatus as claimed in claim 1 wherein at least one read/write head is provided for all of the tracks that are available for information storage on the storage medium.

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15-16. (canceled).

17. (original): An information storage apparatus as claimed in claim 1 wherein the head assembly and information storage medium are resiliently biased towards one another.

18. (original): An information storage apparatus as claimed in claim 1 wherein each bit of storage on said storage medium is associated with just one head.

19. (original): An information storage apparatus as claimed in claim 1 comprising an information transfer sub-assembly to transfer information to or from the read/write heads.

20. (original): An information storage apparatus as claimed in claim 10 wherein said read/write heads are formed by deposition onto a glass ceramic wafer, said wafer being formed with connections to the heads.

21. (original): An information storage apparatus as claimed in claim 1 comprising a tracking sub-assembly to adjust the positioning of the read/write heads of the drive so that each head is correctly aligned with its particular track on the storage medium.

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22. (original): An information storage apparatus as claimed in claim 21 wherein said tracking sub-assembly comprises one or more piezoelectric elements.

23. (original): An information storage apparatus as claimed in claim 22 wherein one or more piezoelectric elements is/are arranged to adjust the position of all of said heads together.

24. (original): An information storage apparatus as claimed in claim 22 wherein said one or more piezoelectric elements is/are arranged to act on the structure or element on which the read/write heads are mounted to cause a degree of deformation of the supporting structure or element such that the heads mounted thereon undergo movement and can be adjusted in position.

25. (original): An information storage apparatus as claimed in claim 1 comprising an oscillation drive mechanism for oscillating the information storage medium with respect to the head assembly.

26. (canceled).

27. (original): An apparatus as claimed in claim 25 comprising a piezo-electric actuator for driving said oscillation.

28-30. (canceled).

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31. (original): An apparatus as claimed in claim 25 comprising two oscillating information storage media or head arrays arranged to oscillate in anti-phase.

32-33. (canceled).

34. (original): An apparatus as claimed in claim 25 wherein the information storage medium and array of heads are arranged to oscillate linearly relative to one another.

35. (canceled).

36. (original): An apparatus as claimed in claim 25 wherein said array of heads and said information storage medium are rectangular.

37-54. (canceled).